

First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

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Page 2

In the claims

Claims 1-63 are pending in the application, which are amended and cancelled as indicated below.

1. (currently amended) ~~A projector~~ An electronic device comprising:  
a broad-spectrum light source having a broad spectrum; and,  
a narrow-spectrum light source having a narrow spectrum complementing the broad spectrum of the broad-spectrum light source.
2. (currently amended) The ~~projector~~ electronic device of claim 1, wherein the broad spectrum of the broad-spectrum light source has a partial spectral power deficiency, and the narrow spectrum of the narrow-spectrum light source corresponds to the partial spectral power deficiency.
3. (currently amended) The ~~projector~~ electronic device of claim 2, wherein the broad-spectrum light source outputs light greater than a threshold brightness level throughout the broad spectrum except at a part of the broad spectrum at which the partial spectral power deficiency exists.
4. (currently amended) The ~~projector~~ electronic device of claim 3, wherein the narrow-spectrum light source outputs light at the part of the broad spectrum at which the partial spectral power deficiency of the broad-spectrum light source exists greater than the threshold brightness level.

First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

---

Page 3

5. (currently amended) The ~~projector~~ electronic device of claim 2, such that light output by the broad-spectrum light source in combination with light output by the narrow-spectrum light source is greater than a threshold brightness level throughout the broad spectrum.

6. (currently amended) The ~~projector~~ electronic device of claim 2, wherein the partial spectral deficiency comprises a red spectral power deficiency.

7. (currently amended) The ~~projector~~ electronic device of claim 1, wherein the narrow spectrum of the narrow-spectrum light source has a high color intensity corresponding to a low color intensity of the broad spectrum of the broad-spectrum light source.

8. (currently amended) The ~~projector~~ electronic device of claim 7, wherein the broad-spectrum light source outputs light having a color intensity greater than a threshold color intensity level throughout the broad spectrum except at a part of the broad spectrum having the low color intensity.

9. (currently amended) The ~~projector~~ electronic device of claim 8, wherein the narrow-spectrum light source outputs light having the high color intensity greater than the threshold color intensity level at the part of the broad spectrum at which the light output by the broad-spectrum light source has the low color intensity.

10. (currently amended) The ~~projector~~ electronic device of claim 7, such that light output by the broad-spectrum light source in combination with light output by the narrow-spectrum light source has a color intensity greater than a threshold color intensity level throughout the broad spectrum.

First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

---

Page 4

11. (currently amended) The ~~projector~~ electronic device of claim 7, wherein the low color intensity comprises one of a low blue intensity and a low green intensity.

12. (currently amended) The ~~projector~~ electronic device of claim 1, wherein the broad-spectrum light source comprises an ultra-high-pressure (UHP) mercury-vapor arc lamp.

13. (currently amended) The ~~projector~~ electronic device of claim 1, wherein the narrow-spectrum light source comprises at least one light-emitting diode (LED).

14. (cancelled)

15. (currently amended) A ~~projector~~ electronic device comprising:  
a primary light means for providing light having a broad spectrum, the light being weak at a narrow part of the broad spectrum; and,  
a compensatory light means for compensating for the narrow part of the broad spectrum at which the light is weak.

16. (currently amended) The ~~projector~~ electronic device of claim 15, wherein the light is weak at the narrow part of the broad spectrum in that a brightness of the light is weak at the narrow part of the broad spectrum.

17. (currently amended) The ~~projector~~ electronic device of claim 16, wherein the narrow part of the broad spectrum comprises a red spectral part of the broad spectrum.

First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

---

Page 5

18. (currently amended) The ~~projector~~ electronic device of claim 15, wherein the light is weak at the narrow part of the broad spectrum in that a color intensity of the light is weak at the narrow part of the broad spectrum.

19. (currently amended) The ~~projector~~ electronic device of claim 18, wherein the narrow part of the broad spectrum comprises one of a blue spectral part and a green spectral part of the broad spectrum.

20. (currently amended) The ~~projector~~ electronic device of claim 15, wherein the primary light means comprises an ultra-high-pressure (UHP) mercury-vapor arc lamp, and the compensatory light means comprises at least one light-emitting diode (LED).

21.-29. (cancelled)

30. (currently amended) ~~A projection system;~~ An electronic device comprising:  
a reflector;  
a primary light source positioned within the reflector and outputting light with a broad spectrum; and,  
a secondary light source positioned outside the reflector and outputting light with a narrow spectrum and optically routed for combination with the light output by the primary light source.

31. (currently amended) The ~~projection system~~ electronic device of claim 30, wherein the broad spectrum of the light output by the primary light source has a narrow spectral power deficiency to which the narrow spectrum of the light output by the secondary light source corresponds.

First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

---

Page 6

32. (currently amended) The ~~projection-system~~ electronic device of claim 31, wherein the narrow spectral deficiency is one of a light brightness deficiency at the narrow spectrum and a color intensity deficiency at the narrow spectrum.

33. (currently amended) The ~~projection-system~~ electronic device of claim 30, further comprising fiber optics to optically route the light output by the secondary light source for combination with the light output by the primary light source.

34.-36. (cancelled)

37. (currently amended) ~~A projection-system~~ An electronic device comprising:  
means for emitting first light having a broad spectrum; and,  
means for emitting second light having a narrow spectrum complementing the broad spectrum of the first light.

38. (currently amended) The ~~projection-system~~ electronic device of claim 37, wherein the broad spectrum has a partial spectral power deficiency, and the narrow spectrum corresponds to the partial spectral power deficiency.

39. (currently amended) The ~~projection-system~~ electronic device of claim 37, wherein the narrow spectrum has a high color intensity corresponding to a low color intensity of the broad spectrum.

40. (currently amended) A method for performance in conjunction with ~~a projector~~ an electronic device comprising:

First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

---

Page 7

providing light by a broad-spectrum light source having a broad spectrum;  
providing light by a narrow-spectrum light source having a narrow spectrum  
complementing the broad spectrum of the broad-spectrum light source; and,  
combining the light provided by the broad-spectrum light source with the light provided by  
the narrow-spectrum light source.

41. (original) The method of claim 40, further comprising adjusting the light provided by the  
narrow-spectrum light source to compensate for a partial spectral power deficiency of the broad  
spectrum of the light provided by the broad-spectrum light source, the narrow spectrum of the  
light provided by the narrow-spectrum light source corresponding to the partial spectral power  
deficiency.

42. (original) The method of claim 40, further comprising adjusting the light provided by the  
narrow-spectrum light source to compensate for a low color intensity of the broad spectrum of  
the light provided by the broad-spectrum light source, the narrow spectrum of the light provided  
by the narrow-spectrum light source having a high color intensity corresponding to the low color  
intensity of the broad spectrum of the light provided by the broad-spectrum light source.

43.-45. (cancelled)

46. (currently amended) A method for performance in conjunction with a projector an  
electronic device comprising:

providing a primary light source having a broad spectrum;  
providing a secondary light source having a narrow spectrum complementing the broad  
spectrum of the primary light source; and,

First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

---

Page 8

positioning the secondary light source relative to the primary light source so that light provided by the primary light source is combined with light provided by the secondary light source.

47.-48. (cancelled)

49. (original) The method of claim 46, wherein positioning the secondary light source relative to the primary light source comprises positioning the secondary light source outside a reflector in which the primary light source is positioned and optically routing the light provided by the secondary light source for combination with the light provided by the primary light source.

50.-51. (cancelled)

52. (currently amended) ~~A projection system~~ An electronic device comprising:  
a light source of a first type; and,  
a light source of a second type, a spectrum of the light source of the second type complementing a spectrum of the light source of the first type.

53. (original) The projection system of claim 52, wherein the spectrum of the light source of the first type is broad, and the spectrum of the light source of the second type is narrow.

54. (original) The projection system of claim 52, wherein the first type is an ultra-high-pressure (UHP) mercury-vapor arc lamp type.

55. (original) The projection system of claim 52, wherein the second type is a light-emitting diode (LED) lamp type.

First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

---

Page 9

56. (currently amended) A narrow-spectrum light source for use in a ~~projection-system~~ an electronic device having a primary broad-spectrum light source, the narrow-spectrum light source having a narrow spectrum complementing a broad spectrum of the broad-spectrum light source.

57. (original) The narrow-spectrum light source of claim 56, wherein the narrow spectrum of the narrow-spectrum light source corresponds to a partial spectral power deficiency of the broad spectrum of the broad-spectrum light source.

58. (original) The narrow-spectrum light source of claim 56, wherein the narrow spectrum of the narrow-spectrum light source has a high color intensity corresponding to a low color intensity of the broad spectrum of the broad-spectrum light source.

59. (original) The narrow-spectrum light source of claim 56, wherein the narrow-spectrum light source includes one or more light-emitting diodes (LED's).

60. (currently amended) A broad-spectrum light source for use in a ~~projection-system~~ an electronic device having a narrow-spectrum light source, the broad-spectrum light source having a broad spectrum, the narrow-spectrum light source having a narrow spectrum complementing the broad spectrum of the broad-spectrum light source.

61. (original) The broad-spectrum light source of claim 60, wherein the broad spectrum of the broad-spectrum light source has a partial spectral power deficiency to which the narrow spectrum of the narrow-spectrum light source corresponds.



First named inventor: Childers  
Serial no. 10/783,799  
Filed 2/21/2004  
Attorney docket no. 100110377-5

---

Page 10

62. (original) The broad-spectrum light source of claim 60, wherein the broad spectrum of the broad-spectrum light source has a low color intensity to which a high color intensity of the narrow spectrum of the narrow-spectrum light source corresponds.

63. (original) The broad-spectrum light source of claim 60, wherein the broad-spectrum light sources includes an ultra-high-pressure (UHP) mercury-vapor arc lamp.